CLAIMS

1. A peptide having a sequence comprising or consisting of QPLALEGSLQK.

2. A peptide selected from the group consisting of GGGPGAGSLQPLALEGSLQK, GSLQPLALEGSLQKRGIV, and QPLALEGSLQKRGIVEQ

3. The peptide having the sequence GSLQPLALEGSLQKRGIV.

4. The peptide having the sequence GGGPGAGSLQPLALEGSLQKRGIVEQ

5. A peptide according to any of claims 1 to 4, in combination with one or more peptides having a sequence selected from LAKEWQALCAYQAEPNTCATAQGEGNIK, KLKVESSPSRSDYINASPIIEHDP, and SFYLKNVQTQETRTLTQFHF.

6. A peptide or peptide combination according to any of the preceding claims, comprising a peptide or peptides differing from those specified by up to and including 4 amino acid alterations (substitution and/or deletion and/or insertion) or one which is extended from any one of the above-mentioned residues at the N-terminus or C-terminus or both with one or more non-wild-type amino acid sequences.

7. A peptide according to any of claims 1-6 in combination with either
   a. IA-2 752-75
   b. IA-2 853-72
   c. IA-2 709-36
   d. IA-2 752-75 and IA-2 853-72
   e. IA-2 709-36 and IA-2 752-75
   f. IA-2 709-36 and IA-2 853-72, or

g. IA-2 709-36 and IA-2 752-75 and IA-2 853-72

8. A pharmaceutical composition comprising a peptide or peptide combination according to any of claims 1 to 7, for the therapy of Type 1 diabetes.

9. A pharmaceutical composition according to claim 8, in which the peptide or each peptide is conjugated or otherwise combined with a tolerance-promoting adjuvant or tolerance promoting cells.

10. A diagnostic method or kit for diagnosis of, or determination of a predisposition to, Type 1 diabetes, comprising a peptide or peptide combination according to any of the preceding claims.

11. A method of treatment or prevention of Type 1 diabetes, in which a peptide or combination of peptides according to any of claims 1 to 7 is administered by parenteral or oral or topical routes, including intradermal, subcutaneous or intravenous injection, or nasally or orally or epicutaneously..

12. A method according to claim 11, in which the peptide or each peptide in a combination of peptides is administered in an amount of up to about 1mg or more per single dose.

13. A method according to claim 12, in which the peptide or each peptide in a combination of peptides is administered in an amount of from about 0.5 to about 500 micrograms or more per single dose.

14. A method according to claim 13, in which a single dose contains from 5 to 250 μg of the, or each, peptide e.g. 5, 50, or 250 μg.

15. A method according to any of claims 10 to 14, in which the peptide or combination is administered in conjunction with a tolerance-promoting adjuvant or tolerance promoting cells.

16. A method of measuring the state of immunological tolerance of a patient to beta cells which comprises the following steps:-

a. Extracting the patient's peripheral blood mononuclear cells
b. Culturing these cells with any of the peptides or peptide combinations above
c. Applying a cytokine ELISPOT analysis to the cultured cells in order to quantitate the cellular production of cytokines eg interferon-γ and interleukin-10.

17. A method according to claim 16, in which the patient's immunological tolerance to beta cells is demonstrated by the presence of an increased number of interleukin-10 producing cells and a reduced number of interferon-γ producing cells.